AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remain(s) under examination in the application is presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or fewer characters; and 2. added matter is shown by underlining.

1-11. (Cancelled).

12. (Currently Amended) A method of forming a cut which encloses a partial volume within a transparent material, by generating optical breakthroughs in the transparent material by application of laser radiation focused into the transparent material at a focal point substantially along an optical axis, comprising the steps of:

adjusting the focal point three-dimensionally to form the cut by sequential arrangement of the optical breakthroughs; and

adjusting the focal point along a spatial spiral, which is located in a desired location of the cut and extends along a main axis that is at substantially right angles to the optical axis.

13. (Currently Amended) The method as claimed in claim 12, wherein the spiral is begun in a part of the transparent material which is posteriorly located in the cut substantially along the optical axis.

14. (Previously Presented) The method as claimed in claim 13, wherein the main axis is located such that posterior parts of the transparent material are not obscured by previously generated optical breakthroughs located in anterior parts of the transparent material.

15. (Currently Amended) A method of forming a cut which encloses a partial volume within a transparent material, by generating optical breakthroughs in the transparent material by application of laser radiation focused into the transparent material at a focal point along an optical axis, comprising the steps of:

adjusting the focal point three-dimensionally to form the cut by sequential arrangement of the optical breakthroughs; and

adjusting the focal point along elevation lines in [[the]] a desired location of the cut, which are located in planes that are substantially parallel to the optical axis.

16. (Currently Amended) The method as claimed in claim 15, wherein each elevation line is begun on a part which is posteriorly located in the cut substantially [[to]] along the optical axis.

17. (Previously Presented) The method as claimed in claim 16, wherein the planes are located such that posterior parts of the transparent material are not obscured by previously generated optical breakthroughs located in anterior parts of the transparent material parts.

18. (Currently Amended) A device for forming a cut which encloses a partial volume within a transparent material, said device comprising:

a source of laser radiation, which focuses laser radiation into the transparent material at a focal point and causes optical breakthroughs substantially at the focal point along an optical axis,

a scanning unit, which three-dimensionally adjusts the focal point; and

a control unit, which controls the scanning unit to form the cut by serial arrangement of the optical breakthroughs in the transparent material, wherein the control unit adjusts the focal point along a spatial spiral, which is located in [[the]] a desired location of the cut and extends along a main axis that is at substantially right angles to the optical axis.

19. (Currently Amended) The device as claimed in claim 18, wherein the scanning unit comprises adjustable optics ~~for adjusting~~ that adjust the focal point substantially anteriorly and posteriorly along the optical axis and a deflecting unit [[for]] that adjusts the focal point two-dimensionally ~~adjustment of the focal point~~ substantially at right angles to the optical axis.

20. (Previously Presented) The device as claimed in claim 19, wherein the control unit controls the adjustable optics according to a substantially continuous, first substantially sinusoidal function.

21. (Previously Presented) The device as claimed in claim 20, wherein the control unit controls the deflecting unit in one of two spatial directions according to a second substantially sinusoidal function, and in the other of the two spatial directions according to a substantially linear function having an oscillation or stepped function superimposed thereon.

22. (Currently Amended) The device as claimed claim 18 wherein the control unit begins the spatial spiral on a part of the transparent material which is posteriorly located substantially along the optical axis.

23. (Previously Presented) The device as claimed in claim 18, wherein the control unit arranges the main axis such that posterior parts of the transparent material are not obscured by previously created optical breakthroughs in anterior parts of the transparent material.

24. (Currently Amended) A device for forming a cut which encloses a partial volume within a transparent material, said device comprising:

a source of laser radiation, which focuses laser radiation into the transparent material at a focal point and causes optical breakthroughs substantially at the focal point along an optical axis,

a scanning unit, which three-dimensionally adjusts the focal point; and

a control unit, which controls the scanning unit to form the cut by serial arrangement of the optical breakthroughs in the transparent material, wherein the control unit adjusts the focal point substantially along elevation lines, which are located in planes that are substantially parallel to the optical axis.

25. (Previously Presented) The device as claimed in claim 24, wherein the scanning unit comprises adjustable optics to adjust the focal point along the optical axis and a deflecting unit to effect two-dimensional adjustment of the focal point at substantially right angles to the optical axis.

26. (Previously Presented) The device as claimed in claim 25, wherein the control unit controls the adjustable optics according to a substantially continuous, first substantially sinusoidal function.

27. (Previously Presented) The device as claimed in claim 26, wherein the control unit controls the deflecting unit in one of two spatial directions according to a second substantially sinusoidal function, and in the other of the two spatial directions according to a substantially linear function having an oscillation or stepped function superimposed thereon.

28. (Previously Presented) The device as claimed claim 24, wherein the control unit begins the elevation line on a part of the transparent material which is posteriorly located substantially along the optical axis.

29. (Previously Presented) The device as claimed in claim [[18]] 24, wherein the control unit arranges the planes such that posterior parts of the transparent material are not obscured by previously created optical breakthroughs located in anterior parts.